

**Abstract of the Disclosure**

The present invention presents methods for modeling the high frequency and noise characterization of MOSFETs. The models may be readily implemented as part of a SPICE or other simulation in a design flow. In particular,

5       this invention is capable of providing a sub-circuit representation of a MOSFET that can accurately predicate a MOSFET's low frequency, high frequency, and noise characterizations. An interface is described through which a user may simultaneously optimize all of these characterizations. Further, methods are presented for building models that can predicate the variations in MOSFETs due to

10     manufacturing processes and generate a corresponding corner model.